Children in good shape have better appetite control and energy expenditure

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Adolescents of ages between 12 and 17, with a good physical condition and regular physical activity present increased levels of insulin and leptin, which are hormones involved in the development of diabetes, appetite control and energy expenditure. This was the conclusion drawn from a study recently conducted at the Department of Physiology of the University of Granada. Further, after thorough analysis of a number of scientific studies, they also concluded that physical activity and physical condition are negatively associated to adolescents' body fat.

The University of Granada studied how fitness and physical activity in adolescents may affect their levels of insulin and leptin, by using for the first time in Europe a standardized method. To carry out this study, researchers analysed a sample of 3,800 European adolescents aged between 12.5 and 17.5.

This study is based on a large study conducted by a number of research centres, called HELENA (Healthy Lifestyle in Europe by Nutrition in Adolescents), funded by the European Union and developed in 10 cities in 9 European countries, to include Spain.

Nutritional Status

In both projects, the purpose was to analyze the nutritional status and lifestyle of adolescents, including aspects such as physical activity, fitness and hormonal profile, among others.

Scientists suggest that it is likely that "the mechanism by which fitness and physical activity may

affect insulin and leptin levels in adolescents is associated to the metabolic effects of physical activity and low fat levels".

The results obtained in this study also confirmed that intense physical activity and high fitness levels in adolescents are related to lower fat body levels in children and adolescents.

This research was conducted by David Jiménez Pavón, Department of Physiology, University of Granada, and led by Manuel J. Castillo Garzón, Jonatan Ruiz Ruiz and Marcela González Gross.

Provided by University of Granada

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